

Changes to the Specification

Please delete the paragraph beginning on page 2, line 15 and insert the following paragraph:

"A DSSS matrix may be comprised of rows of pseudo-noise (PN) sequences, which are orthogonal to each other."

Please delete the paragraph beginning on page 4, line 5 and insert the following paragraph:

"Additionally, the present invention may be comprised of a two-dimensional transmission matrix that is over-determined, creating a transmit symbol sequence, which contains more symbols than are in the input symbol sequence. The additional (excess) symbols are redundant symbols. Corrupted symbols in the received symbol sequence may be discarded, and replaced by redundant uncorrupted symbols. A recovery matrix is formed by computing an inverse of a transmission matrix that has been modified by dropping rows columns corresponding to corrupted terms in the received symbol sequence."

Please delete the paragraph beginning on page 9, line 6 and insert the following paragraph:

"Fig 3 is a numeric matrix multiplication example 300 using a non-orthogonal over-determined matrix, which can be referred to as a "mother" matrix. An input symbol sequence 302 with 5 terms has been formed from data. A two dimensional mother transmission matrix 304 is comprised of non-orthogonal rows. Note that the transmission matrix 304 has 6 columns but only 5 rows, so it is an over-determined matrix. A transmit symbol sequence 306 is created by multiplying the input symbol sequence 302 by the transmission matrix 304. The use of an over-determined transmission matrix creates 6 terms in the transmit symbol sequence 306 from only 5 terms in the input symbol sequence 302. This 6-term transmit symbol sequence is sent over a signal path. Assume, for

example, that the 5th symbol (the term with a value of -2) has been corrupted in transmission, and has therefore been omitted from a truncated received symbol sequence 308. The original input symbol sequence may still be recovered by multiplying the truncated received symbol sequence by a daughter inverse recovery matrix. Dropping the row column of the mother transmission matrix 304 that corresponds to the corrupt term in the truncated received symbol sequence creates the daughter matrix. If the 5th row column, corresponding to the 5th corrupt received term, is removed from the transmission matrix 304, a daughter transmission matrix with the corrupt row column removed 310 is created. It has been labeled C5 to designate that the 5th column is removed. If the C5 inverse is computed, a recovery matrix 312 is found. The output symbol sequence 314 is computed without error by multiplying the truncated received symbol sequence 308 by the inverse of the truncated daughter transmission matrix 312."